



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/363,642

07/30/1999

TOSHIHITO KIDO

024060

8372

21839

7590

12/23/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

VILLECCO, JOHN M

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 12/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/363,642

Applicant(s)

KIDO ET AL.

Examiner

John M. Villecco

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16, 18-22, 24, 25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) 4, 17, 23 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION II

Response to Arguments

1. This **action is non-final** due to the new grounds of rejection presented below.
2. Applicant's arguments, see pages 11-14, filed September 22, 2003, with respect to the rejection(s) of claim(s) 1-5 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ikeda and Arai.
3. Applicant's arguments with respect to claims 6-21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. **Claims 24, 25, 26, and 27 are objected to** under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 24 appears to be identical to claim 2. Claim 25 appears to be identical to claim 3. Claim 26 appears to be identical to claim 4 and claim 27 appears to be identical to claim 5.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2612

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 6, 10, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamagishi (U.S. Patent No. 5,854,875).**

7. Regarding *claim 6*, Yamagishi discloses an image processor (16) for performing a predetermined processing on image data from an image sensing unit, including a taking lens (10) and an image sensing device (14), a system control circuit (50) for detecting the type of recording medium attached to an interface (26) of the camera, and a power supply controller (101). Based on the type of recording medium attached power is controlled in the camera by inhibiting certain actions from taking place. See column 6, line 13 to column 7, line 25.

8. As for *claim 10*, Yamagishi discloses a recorder in the form of a memory card (28) or hard disk (80).

9. As for *claim 19*, Yamagishi discloses a system control circuit (50) for detecting the type of recording medium attached to an interface (26) of the camera, and a power supply controller (101). Based on the type of recording medium attached power is controlled in the camera by inhibiting certain actions from taking place. See column 6, line 13 to column 7, line 25.

10. With regard to *claim 21*, Yamagishi teaches that a different recording medium (i.e. memory card or hard disk) can be attached to the camera and a condition of connection is detected. Based on the condition of connection, power supply in the camera is controlled.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 6-10 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (U.S. Patent No. 6,167,208) and further in view of Arai et al. (U.S. Patent No. 6,130,717).**

13. Additionally *claim 6* can be rejected by the combination of Sato and Arai. Sato discloses an image processor (36) for performing processing on image data from an image sensing unit comprising the group of the lens (31) and the CCD (32) and a control circuit (41) for detecting what type of device is connected to the lens mount (12). See column 3, lines 53-65.

Sato, however, fails to specifically disclose a power supply controller for controlling power supply in the camera in accordance with the detecting. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Since Sato teaches the ability to detect the type of device that is attached to an interface and Arai teaches controlling power supply in accordance with the detection condition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the

Art Unit: 2612

power supply in the camera of Sato based on the type of device attached to the interface so that wasteful power is not consumed and photographing time is not shortened.

14. As for *claim 7*, Arai discloses that if the detachable switch (35) detects that the lens unit is not attached (i.e. the lens unit is not attached to the interface), the power supply voltages from the battery (37) are prohibited. See column 8, line 41 to column 9, line 10.

15. With regard to *claim 8*, as mentioned above, Arai discloses that it is well known in the art to supply power to an interface. Inherently, Arai would include a power supply portion for getting the power to the different parts of the camera. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera.

16. Regarding *claim 9*, inherently the different parts of the camera would each have individual power supply portions in order for the supplied power to be provided to each of the circuits. The power supply portions would take the form of wiring. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera. The same concept goes for each of the different parts of the camera body that do not receive power.

17. As for *claim 10*, Sato discloses an image memory (38) for recording the electric signal as image data. See Figure 2.

18. *Claim 19* is considered a method claim corresponding to claim 6. Please see the discussion of claim 6 above.

19. *Claim 20* is considered a method claim corresponding to claim 7. Please see the discussion of claim 7 above.

Art Unit: 2612

20. As for *claim 21*, Sato discloses the ability to detect the type of device that is attached to the lens interface. See column 3, lines 53-65.

21. **Claims 1, 5, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717).**

22. Regarding *claim 1*, Ikeda discloses a digital camera including an image sensing unit (100) which includes a lens (101) and a CCD (103), and a camera body (140) which includes an image processor (152).

Ikeda, however, fails to explicitly disclose a detector for detecting a condition of connection of the image sensing unit to the camera body, and a power supply controller for controlling power supply based on a result of the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Therefore, when using the teach of Ikeda to show an image pickup unit, it would have been obvious to one of ordinary skill in the art based on the teachings of Arai to disable certain parts of the camera so that power is not wasted if the image pickup unit is not attached properly.

23. As for *claim 5*, Ikeda discloses the use of memory (156) to record the electric signal as image data.

Art Unit: 2612

24. With regard to *claim 27*, Ikeda discloses the use of memory (156) to record the electric signal as image data.

25. **Claims 2, 3, 24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717) and further in view of Kido (Japanese Publ. No. 10-079874).**

26. Regarding *claim 2*, as mentioned above in the discussion of claim 1, both Ikeda and Arai disclose all of the limitations of the parent claim. However, neither of the aforementioned references discloses that the camera body has a flash control circuit. Kido, on the other hand, discloses that it is well known in the art to provide a flash control circuit in the body of a camera. Kido discloses that the camera body (2) includes a flash control circuit (ref. no. 214, paragraph 0076). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a flash controller in the camera body of Ikeda so that images with proper lighting can be captured.

27. As for *claim 3*, although Arai does not specifically disclose controlling power supply to a flash control circuit it would have been obvious to one of ordinary skill in the art to inhibit the flash from working in Ikeda if the lens unit was not attached properly, since the lens unit and image sensor would not be able to capture an image if it were not connected to the camera body. By doing this, the power supply can be conserved since needless power is not being sent to the flash.

28. With regard to *claim 24*, as mentioned above in the discussion of claim 1, both Ikeda and Arai disclose all of the limitations of the parent claim. However, neither of the aforementioned

Art Unit: 2612

references discloses that the camera body has a flash control circuit. Kido, on the other hand, discloses that it is well known in the art to provide a flash control circuit in the body of a camera. Kido discloses that the camera body (2) includes a flash control circuit (ref. no. 214, paragraph 0076). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a flash controller in the camera body of Ikeda so that images with proper lighting can be captured.

29. Regarding *claim 25*, although Arai does not specifically disclose controlling power supply to a flash control circuit it would have been obvious to one of ordinary skill in the art to inhibit the flash from working in Ikeda if the lens unit was not attached properly, since the lens unit and image sensor would not be able to capture an image if it were not connected to the camera body. By doing this, the power supply can be conserved since needless power is not being sent to the flash.

30. **Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717) and further in view of Yamamoto (U.S. Patent No. 5,895,127).**

31. Regarding *claim 28*, as mentioned above in the discussion of claim 1, both Ikeda and Arai disclose all of the limitations of the parent claim. However, neither of the aforementioned references discloses that the detachably connectable device is one of an extension cable, personal computer interface and a video capture adapter. Yamamoto, on the other hand discloses that it is well known in the art to replace an interchangeable lens with a personal computer interface. More specifically, the lens mount (90) can either have the optical system (12) of the interface

Art Unit: 2612

unit (90) attached to it. The interface unit is used to send image data to a personal computer.

See column 3, lines 1-9. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect a personal computer interface in place of an optical lens system so that images can be transferred out of the camera to a personal computer without using different interfaces for each.

32. Claims 11-14, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Sato (U.S. Patent No. 6,167,208) and further in view of Arai et al. (U.S. Patent No. 6,130,717).

33. Regarding *claim 11*, Ikeda discloses a digital camera including an image sensing unit (100) which includes a lens (101) and a CCD (103), and a camera body (140) which includes an interface (150) for connecting the image sensing unit (100) and an image processor (152).

Ikeda however, fails to specifically disclose that a plurality of devices can be attached to the interface or a detector for detecting connection of the external device and identifying the external device. Sato, on the other hand, discloses an image processor (36) for performing processing on image data from an image sensing unit comprising the group of the lens (31) and the CCD (32) and a control circuit (41) for detecting what type of device is connected to the lens mount (12). See column 3, lines 53-65. By connecting a plurality of external devices, the camera is able to output the image signal without a multitude of interfaces without cluttering the camera body. Therefore, it would have been obvious to replace the camera head of Ikeda with an additional interface device for outputting the image signal to a computer without addition interfaces.

Art Unit: 2612

Furthermore, neither, Ikeda nor Sato specifically disclose a power supply controller for controlling power supply within a camera in accordance with a result of the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disabled in order to conserve energy. See column 8, lines 40-64. Since Sato teaches the ability to detect the type of device that is attached to an interface and Arai teaches controlling power supply in accordance with the detection condition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera of Sato based on the type of device attached to the interface so that wasteful power is not consumed and photographing time is not shortened.

34. As for *claim 12*, Arai discloses that if the detachable switch (35) detects that the lens unit is not attached (i.e. the lens unit is not attached to the interface), the power supply voltages from the battery (37) are prohibited. See column 8, line 41 to column 9, line 10.

35. With regard to *claim 13*, as mentioned above, Arai discloses that it is well known in the art to supply power to an interface. Inherently, Arai would include a power supply portion for getting the power to the different parts of the camera. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera.

Art Unit: 2612

36. Regarding *claim 14*, inherently the different parts of the camera would each have individual power supply portions in order for the supplied power to be provided to each of the circuits. The power supply portions would take the form of wiring. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera. The same concept goes for each of the different parts of the camera body that do not receive power.

37. As for *claim 18*, both Ikeda and Sato disclose image memories for storing the image signals.

38. With regard to *claim 22*, Ikeda discloses a digital camera including an image sensing unit (100) which includes a lens (101) and a CCD (103), and a camera body (140) which includes an interface (150) for connecting the image sensing unit (100) and an image processor (152).

Ikeda however, fails to specifically disclose that a plurality of devices can be attached to the interface or a detector for detecting connection of the external device and identifying the external device. Sato, on the other hand, discloses an image processor (36) for performing processing on image data from an image sensing unit comprising the group of the lens (31) and the CCD (32) and a control circuit (41) for detecting what type of device is connected to the lens mount (12). See column 3, lines 53-65. By connecting a plurality of external devices, the camera is able to output the image signal without a multitude of interfaces cluttering the camera body. Therefore, it would have been obvious to replace the camera head of Ikeda with an additional interface for outputting the image signal to a computer without addition interfaces.

Furthermore, neither, Ikeda nor Sato specifically disclose a power supply controller for controlling power supply within a camera in accordance with a result of the detection. Arai, on

Art Unit: 2612

the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Since Sato teaches the ability to detect the type of device that is attached to an interface and Arai teaches controlling power supply in accordance with the detection condition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera of Sato based on the type of device attached to the interface so that wasteful power is not consumed and photographing time is not shortened.

39. **Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Sato (U.S. Patent No. 6,167,208) and further in view of Arai et al. (U.S. Patent No. 6,130,717) and Kido (Japanese Publ. No. 10-079874).**

40. Regarding *claim 15*, as mentioned above in the discussion of claim 11, Ikeda, Sato, and Arai disclose all of the limitations of the parent claim. However, none of the aforementioned references discloses a flash control circuit in the camera body. Kido, on the other hand, discloses that it is well known in the art to provide a flash control circuit in the body of a camera. Kido discloses that the camera body (2) includes a flash control circuit (ref. no. 214, paragraph 0076). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

Art Unit: 2612

was made to include a flash controller in the camera body of Ikeda so that images with proper lighting can be captured.

41. As for *claim 16*, although Arai does not specifically disclose controlling power supply to a flash control circuit it would have been obvious to one of ordinary skill in the art to inhibit the flash from working in Ikeda if the lens unit was not attached properly, since the lens unit and image sensor would not be able to capture an image if it were not connected to the camera body. By doing this, the power supply can be conserved since needless power is not being sent to the flash.

Allowable Subject Matter

42. Claims 4, 17, 23, and 26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

43. The following is a statement of reasons for the indication of allowable subject matter:

44. Regarding *claims 4, 17, and 26*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that when image sensing unit is connect by way of a cable and the cable has a length longer than a predetermined length, the power supply controller does not supply power to the flash control circuit.

45. As for *claim 23*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the power supply controller includes control logic for selectively supplying power to portion of the camera and not to other portions of the camera, the selection being based on a detected type of the device detected by the detector.

Art Unit: 2612

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 872-9306 (For either formal or informal communications intended for entry. For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**")

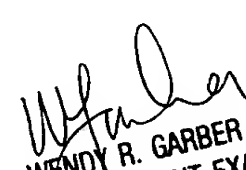
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460. The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service desk whose telephone number is (703) 306-0377.


JMV
12/9/03


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600